

SEP 21 2007

Serial No. 10/574,556
Filing Date: April 3, 2006Customer No. 26,289
Attorney's Docket No. 2003JP322Remarks

The Examiner has rejected claims 1-4, 6, 7, 10, 12-18 under 35 USC 102 (b), as being anticipated by Tashiro (JP 2002-293941). The Examiner has also rejected 5, 19-20 under 35 USC 103(a) as being unpatentable over Tashiro (JP 2002-293941) in view of Babich et al (US 5,141,817), and further rejected claims 8, 9 and 11 under 35 USC 103(a) as being unpatentable over Tashiro (JP 2002-293941) in view of Uchimaru et al (US 2002/0142533).

Claims 1, 3 and 4 have been amended.

Claim 1 now relates to a composition for formation of etching stopper layer, comprising a silicon-containing polymer, wherein 5% to 100% by mole, based on the total number of moles of silicon contained in the silicon-containing polymer in the composition, of silicon is contained in a disilylbenzene structure, and further where the silicon-containing polymer has a carbon content of not less than 30% by weight.

Claim 3 refers to a silicon-containing material for formation of etching stopper layer, comprising a disilylbenzene structure formed by curing a silicon-containing polymer, wherein 5% to 100% by mole, based on the total number of moles of silicon contained in the silicon-containing material, of silicon is contained in a disilylbenzene structure, and further where the silicon-containing polymer has a carbon content of not less than 30% by weight.

Claim 4 refers to a semiconductor device comprising, as an etching stopper layer, a silicon-containing material for formation of etching stopper layer comprising a silicon-containing material for formation of etching stopper layer,

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comprising a disilylbenzene structure formed by curing a silicon-containing polymer, wherein 5% to 100% by mole, based on the total number of moles of silicon contained in the silicon-containing material, of silicon is contained in a disilylbenzene structure.

In claims 1 and 3 support for the carbon content of not less than 30% by weight for the silicon containing polymer is found on page 8, line 8, and exemplified in Example 4 on page 18. The prior art does not disclose a silicon containing polymer wherein 5% to 100% by mole, based on the total number of moles of silicon contained in the silicon-containing polymer, of silicon is contained in a disilylbenzene structure, and further where the silicon-containing polymer has a carbon content of not less than 30% by weight. As explained in the specification, control of the carbon content of the polymer is important in improving the etch selectivity of the novel film and the substrate, especially for SiO₂ film.

The Examiner has equated the term "hard coat film" in the prior art reference JP (JP 2002-293941) paragraph [0042] to etch stopping layer. In fact, one of ordinary skill in the art would not interpret the term hard coat film to be the same as etch stopping layer. A hard coat film typically refers to antifouling films, abrasion-resistant films and chemical resisting films. An etch stopping layer is used to refer to a film which is useful to reduce the etch rate of film under dry etching conditions, as stated in the present application on pages 3-5. US 6933040 refers to hard coat as, "A hard coat film which comprises a substrate and a hard coat layer, wherein the hard coat layer is formed by applying on the substrate with a curable composition containing a photocurable substance and an oligomer type photopolymerization initiator and then curing by light irradiation to the applied curable composition. The hard coat film is excellent in the adhesion property between the hard coat layer and the substrate after heat treatment, and can restrain the gases generated in heat treatment." Similarly,

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US 6329041 mentions hard coat film as: "The present invention relates to a hard coat film used for various types of displays, wherein cracking and peeling of the hard coat layer is prevented, hardness reduction of the hard coat film is suppressed and the pencil hardness of the hard coat film is in the range of 4H-8H. The hard coat film includes a buffer layer (2) with a thickness of 3-50 μ m, formed on at least one side of a plastic base film (1), which has a buffer function against deformation of the hard coat layer in response to deformation of the plastic base film (1), and a hard coat layer (3) with a thickness of 3-15 .mu.m additionally formed over the buffer layer. The hard coat film (9) is designed so that the pencil hardness of the plastic base film (1), the pencil hardness of the buffer layer and the pencil hardness of the hard coat layer increase in that order." Thus clearly hard coat films refer to a totally different technology than etch stopping layer. Due to these stated reasons the Examiner is requested to remove the rejection to independent claims 4 and 5.

In view of the above amendments and remarks, the present application is believed to be in condition for allowance, and reconsideration of it is requested. If the Examiner disagrees, he/she is requested to contact the attorney for Applicants at the telephone number provided below.

Respectfully submitted,



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